

**WEST**

5/17

L2: Entry 51 of 97

File: DWPI

Aug 31, 1999

DERWENT-ACC-NO: 1999-469401

DERWENT-WEEK: 199939

COPYRIGHT 2002 DERWENT INFORMATION LTD

TITLE: Feeding bowl for animals - has a recess for an aroma emitting device which  
emits an aroma in the vicinity of the bowl when in use

INVENTOR: MARTIN, A J E

PATENT-ASSIGNEE:

ASSIGNEE	CODE
AROMA DEV PTY LTD	AROMN

PRIORITY-DATA: 1996ZA-0007992 (September 20, 1996)

PATENT-FAMILY

PUB-NO	PUB-DATE	LANGUAGE	PAGES	MAIN-IPC
ZA 9711277 A	August 31, 1999	E	019	A01K000/00

## APPLICATION-DATA:

PUB-NO	APPL-DATE	APPL-NO	DESCRIPTOR
ZA 9711277A	December 15, 1997	1997ZA-0011277	

INT-CL (IPC): A01 K 0/00

ABSTRACTED-PUB-NO: ZA 9711277A

## BASIC-ABSTRACT:

The bowl has a receiving area for receiving animal feed and an recess in which an aroma emitting device is located. When in use and food is in the bowl, an aroma is emitted that can be smelt by an animal in the vicinity of the bowl

CHOSEN-DRAWING: Dwg.1/1

TITLE-TERMS: FEED BOWL ANIMAL RECESS AROMA EMIT DEVICE EMIT AROMA VICINITY BOWL

DERWENT-CLASS: P14

SECONDARY-ACC-NO:

Non-CPI Secondary Accession Numbers: N1999-350488

Drew Becker  
1761

97/11277

PATENTLEERONSLAG  
PATENT FILE COVER

Applicant(s)  
Applicant(s)

Key reference no.  
Correspondence address

Ind/country No/num

Adres/Imprelekening  
Address/Concepció

ADAMSON ADAMS

Shopridge

Co. 55000-2210

ADAMS & ADAMS  
APPLICANT'S PATENT ATTORNEYS

REPUBLIC OF SOUTH AFRICA  
PATENTS ACT, 1978  
APPLICATION FOR A PATENT AND  
ACKNOWLEDGEMENT OF RECEIPT  
(Section 30(1) Regulation 22)

THE GRANT OF A PATENT IS HEREBY REQUESTED BY THE UNDERMENTIONED APPLICANT  
ON THE BASIS OF THE PRESENT APPLICATION FILED IN DUPLICATE

REPUBLIC OF SOUTH AFRICA  
FORM P.1 /A REVENUE  
(to be lodged in duplicate)

15.12.97

R 416.00

21 01 PATENT APPLICATION NO

9711277

PAT-A-REF-NUM-137538

71 FULL NAME(S) OF APPLICANT(S)

AROMA DEVELOPMENTS (PROPRIETARY) LIMITED

ADDRESS(ES) OF APPLICANT(S)

12 KRIJS STREET, FACTOR HOUSE, JOHANNESBURG, REPUBLIC OF SOUTH AFRICA

54 TITLE OF INVENTION

"THE FEEDING OF ANIMALS"

Only the items marked with an "X" in the block below are applicable.

- THE APPLICANT CLAIMS PRIORITY AS SET OUT ON THE ACCOMPANYING FORM P.2. The earliest priority claimed is  
Country: ZA No: 96/7992 Date: 20 SEPTEMBER 1996
- THE APPLICATION IS FOR A PATENT OF ADDITION TO PATENT APPLICATION NO 21 01
- THIS APPLICATION IS A FRESH APPLICATION IN TERMS OF SECTION 37 AND BASED ON  
APPLICATION NO 21 01

THIS APPLICATION IS ACCCOMPANIED BY:

- Two copies of a complete specification of 16 pages
- Drawings of 2 sheets
- Publication particulars and abstract (Form P.8 in Duplicate) (for complete only)
- A copy of Figure 1 of the drawings (if any) for the abstract (for complete only)
- An assignment of invention and an affidavit and by Kevin John Rollo Summerley
- Certified priority document(s). (State quantity)
- Translation of the priority document(s)
- An assignment of priority rights
- A copy of Form P.2 and the specification of RSA Patent Application No 21 01 96/7992
- Form P.2 in duplicate
- A declaration and power of attorney on Form P.3
- Request for ante-dating on Form P.4
- Request for classification on Form P.9
- Request for delay of acceptance on Form P.4
- Extra copy of informal drawings (for complete only)

74 ADDRESS FOR SERVICE: Adams & Adams

Pretoria

Dated this 15 day of December 1997

ADAMS & ADAMS  
APPLICANTS PATENT ATTORNEYS

The duplicate will be returned to the applicant's address for service as proof of lodging but is not valid unless endorsed with official stamp

ASA P101

REGISTRAR OF PATENTS, DESIGNS, TRADE MARKS AND COPYRIGHT OFFICIAL DATE STAMP	
15 DEC 1997	
REGISTERED MANUFACTURED BY OR IMPORTED BY	EM PATENTE, MODELE, OU DROITS D'AUTEURSREG
REGISTRAR OF PATENTS	

ADAMS & ADAMS  
PATENT ATTORNEYS  
PRETORIA

A & A Ref No: 137536

FORM P7

REPUBLIC OF SOUTH AFRICA  
Patents Act, 1978

COMPLETE SPECIFICATION  
(Section 30 (1) - Regulation 28)

21	01	OFFICIAL APPLICATION NO
----	----	-------------------------

22	LODGING DATE
----	--------------

9711277

15 DECEMBER 1997

51	INTERNATIONAL CLASSIFICATION
----	------------------------------

A01K

71	FULL NAME(S) OF APPLICANT(S)
----	------------------------------

AROMA DEVELOPMENT (PROPRIETARY) LIMITED

72	FULL NAME(S) OF INVENTOR(S)
----	-----------------------------

ANNA JOLANTA ETLALE MARTIN

54	TITLE OF INVENTION
----	--------------------

"THE FEEDING OF ANIMALS"

9711277

THIS INVENTION relates to the feeding of animals. It relates, in particular, to a method of increasing the food intake of an animal, to a method of feeding an animal and to an animal feeding device.

5 According to a first aspect of the invention,  
there is provided a method of increasing the food intake of  
an animal, which includes

providing the animal with animal feed;

releasing an aroma of a food palatable to the animal

10 in the vicinity of the animal feed; and

allowing the animal to feed.

The method may include conducting the aroma from a supply of the aroma to the vicinity of the animal feed.

According to a second aspect of the invention, there is provided a method of feeding an animal, the method including the steps of

locating animal feed in a receiving formation for an animal to feed on; and

locating aroma emitting means in proximity to the receiving formation so that an aroma emitted by the aroma-emitting means can be smelled, in the vicinity of the animal feed, by the animal.

The method may include conducting, with aroma-conducting means, the aroma emitted by the aroma-emitting means into the vicinity of the animal feed. Thus, in the case of a pet such as a dog or cat the aroma may for example be meat aroma such as that of liver, chicken, beef or the like. Naturally other aromas may be used, depending upon the type of animal.

The aroma may be oil-based.

Typically, the animal is a dog and the animal feed is a dry dog food.

According to a third aspect of the invention, there is provided an animal feeding device which includes a body having at least one receiving formation for receiving animal feed for an animal to feed on; and

\* locating means for locating aroma-emitting means in proximity to the receiving formation so that, in use, with animal feed in the receiving formation, an aroma emitted by the aroma-emitting means can be smelled, in the vicinity of the animal feed, by an animal.

The animal may be a domestic animal, such as a dog, cat or the like. The animal may, instead, be a domesticated animal, e.g. a farm animal such as a cow, horse, pig or the like. This list is not, however, exhaustive and the animal feeding device of the invention may be used to feed other animals such as wild animals or animals kept in a zoo.

The aroma emitting means may be an aroma-emitting object and the locating means may include a compartment in which the object is receivable. The feeding device may include aroma-conducting means for conducting, in use, aroma emitted by the object in the compartment from the compartment into the vicinity of the animal feed.

The aroma-emitting means may, for example, be an absorbent or adsorbent body, into which or onto which an aromatic substance has been absorbed or adsorbed. Preferably, the aromatic substance will have an aroma which is, or which resembles, the aroma of a foodstuff which the animal prefers to eat. Thus, when an animal is fed with an

animal feed which it finds unpalatable, or which it does not prefer, the animal feeding device of the invention will bring about an association between the aroma of the preferred foodstuff and the unpalatable or non-preferred feed thereby encouraging the animal to eat the unpalatable or non-preferred feed.

The body may be in the form of a container which includes a container wall, the receiving formation being located on one side of the container wall and the compartment on the other side of the container wall. A part of the container wall may form a wall of the compartment. The aroma-conducting means may then include at least one opening or hole in the said part of the container wall.

The container may be an animal food bowl. The container wall may thus be a wall of the bowl. The opening or hole in the shaped part of the wall, will thus provide a pathway for the aroma to diffuse from the compartment into the bowl-shaped receiving formation.

The feeding device may include sealing means for sealing the, or each, opening, the sealing means being displaceable between a sealing position in which it seals the openings and a non-sealing, or open, position in which it is spaced from the openings. Thus, the sealing means

may be in the form of a slidable sealing member which is slidingly mounted against the container wall.

The compartment may include a closeable opening for inserting the aroma-emitting object into the compartment and for removing it from the compartment. The compartment may thus be provided with a lid for closing the opening. Preferably, the compartment will have sealing means, such as a rubber seal, for sealingly closing the opening to limit or prevent the escape of aroma from the compartment.

The invention is now described, by way of example, with reference to the accompanying diagrammatic drawings in which:

Figure 1 shows a three-dimensional view of an animal feeding device in accordance with the invention seen from a first side;

Figure 2 shows a partly cut-away and partly sectioned bottom plan view of the feeding device of Figure 1; and

Figure 3 shows a three-dimensional view of the feeding device of Figure 1, seen from a second side opposite to the first side.

Referring to the drawings, reference numeral 10 generally indicates an animal feeding device in accordance

with the invention in the form of a feeding bowl for a pet.

The feeding bowl 10 includes a body 12 defining a dish-shaped receiving formation 14 for receiving animal feed, for example dog pellets, (not shown) and locating means (indicated in dotted lines in Figure 1) generally indicated by reference numeral 16 for locating aroma-emitting means (not shown) in proximity to the receiving formation 14. The locating means 16 is arranged so that, in use, an aroma emitted by the aroma-emitting means can be smelt eg by a dog, in the vicinity of, for example, the dog pellets.

The body 12 includes a frusto-conical shaped outer wall 18 and an inner, cylindrical, wall 20 separated by a substantially horizontal ring-shaped part 22. The receiving formation 14 has a circular base 24 and the cylindrical wall 20 extends upwardly from the periphery of the base 24.

Referring, in particular, to Figures 1 and 2, the locating means 16 includes an elongate box-shaped compartment 26 with an elongate rectangular top 28 and an elongate rectangular base 30, end walls 32, 34 and a side wall 35 (as can be seen more clearly in Figure 2). The compartment 26 is located in the space between the cylindrical wall 20 and the outer wall 18 as can be seen in

Figures 1 and 2. part 36 of the wall 20 forms the side wall of the compartment 26 opposite the side wall 35. A double row of holes 38 is provided in the shared part 36 of the wall 20.

5 Referring again to Figures 1 and 2, an elongate, generally rectangular shaped sealing member 40 extends through a slot 42 in the end wall 34 of the compartment 26 and has a profile which matches that of the cylindrical wall 20 as can be seen, in particular, in Figure 2. The 10 sealing member 40 is slidably displaceable through the slot 42 from a sealing position in which it closes off all of the openings 38 as shown in Figure 1) and a non-sealing or open position in which it is displaced from the openings 38 (as shown in Figure 2). An L-shaped lever 44 for displacing the sealing member 40 extends from one end of the sealing member 40. A part of the lever 44 projects through a slot 48 in the outer wall 18. A handle 50 is secured to the end of the lever 44 and abuts the outer face of the wall 18 as can be seen, in particular, in Figure 3.

20 The base 30 of the compartment 26 is provided with an opening (not shown) with a sliding cover (also not shown) through which an aroma-emitting object or body can be inserted into or removed from the compartment 26. The compartment 26 is, further, provided with seals eg rubber 25 seals (not shown) for sealing, respectively, the sliding

cover in its closed position and the sealing member 40 in its closed position. The feeding device may, conveniently, also be used as a water bowl, the seals preventing ingress of water into the compartment 26 via the holes 38.

5        Thus by sliding the handle 50 towards the compartment 26, the sealing member 40 closes the holes 38 (as indicated in Figure 1) and by sliding the handle 50 in the opposite direction, the sealing member 40 is displaced in the opposite direction to open the holes 38 (as indicated in  
10      Figure 2).

In use, if an animal feed such as dog pellets, cat pellets or the like which an animal finds unpalatable, or which the animal would not choose if it were given a choice between the pellets and a preferred foodstuff, is to be fed to a dog or cat, an aroma-emitting object which emits an aroma of a preferred foodstuff is placed in the compartment 26 and the animal feed is placed in the receiving formation 14. The handle 50 is then displaced to open the holes 38, thereby allowing the aroma emitted by the aroma-emitting object to diffuse through the holes 38 into the vicinity of the animal feed. The association of the aroma of the preferred foodstuff with the unpalatable or less-preferred feed then encourages the animal to eat the unpalatable or less-preferred feed in the receiving formation 14.  
15  
20

Example:

The effectiveness of the method of increasing the food intake of an animal is illustrated by the following tests.

- 5      Twelve healthy adult female Beagles, weighing between 12,1 and 17,5kg, were kept in their usual kennels. The dogs were divided randomly in two groups of six each, one group referred as the experimental group and the other as the control group.
- 10     The dogs were fed for seven days on the same dry commercial dog food using the animal feeding device 10 described above. In the case of the control group, a dry piece of cotton wool was inserted in the compartment 16 and, in the case of the experimental group, a piece of cotton wool, on which a specific oil-based aroma attractive to the dogs is absorbed or adsorbed, was inserted in the compartment 16. After seven days the groups were crossed-over, the control group became the experimental group and vice versa. The food intake was calculated at 07:00 every day by weighing the left-overs. Every dog received 500g dog food for every 24 hours.
- 15     20

It was found that the experimental group 1 ate an average of 437g of the 500g dog food per day, while the control

group 1 ate 317g, ie the experimental group 1 ate 1,4 times more. After the cross-over, the experimental group 2 ate 431g, and the control group 2 ate 381g, ie the experimental group 2 ate 1,1 times more. During the first seven days,  
5 the experimental group 1 ate 437g, while when it became the control group 2 it ate 381, ie 1,2 times more. During the second seven days, the experimental group 2 ate 431g, while when it was the control group 1, it ate 317g, ie 1,4 times more. The experimental groups thus ate about 10-40% more  
10 than the control groups.

Using the Chi-square statistical analysis method, the statistical differences between the groups were analyzed as follows:

Experimental group 1 versus the control group 1, p =  
15 0,0038, ie highly significant statistically.

Experimental group 2 versus control group 2, p = 0,1767, ie not significant statistically.

Experimental group 1 versus control group 2, p = 0,1096, ie not significant statistically.

20 Experimental group 2 versus control group 1, p = 0,0095, ie highly significant statistically.

There were significant differences between the first experimental group and the first control group, as well as between the first control group and the second experimental group. The other tests where the dogs were first exposed to the aromatic food had no significant difference, because the positive effect of the aromatic food was carried over to the subsequent tests. This is a behavioural effect known as association. If the cross-over was done after some time, or if the number of animals was larger, it could exclude the carry-over effect of the aromatic food.

It is an advantage of the invention illustrated that it provides a relatively inexpensive and simple method of encouraging an animal to eat, or to eat more of, an animal feed which may be beneficial to the animal but which the animal would not normally eat if given a choice between the said feed and a preferred foodstuff.

## CLAIMS

1. A method of increasing the food intake of an animal, which includes

providing the animal with animal feed;

5 releasing an aroma of a food palatable to the animal in the vicinity of the animal feed; and

allowing the animal to feed.

2. A method as claimed in claim 1, which includes conducting the aroma from a supply of the aroma to the 10 vicinity of the animal feed.

3. A method of feeding an animal, the method including the steps of

locating animal feed in a receiving formation for an animal to feed on; and

15 locating aroma-emitting means in proximity to the receiving formation so that an aroma emitted by the aroma-emitting means can be smelled, in the vicinity of the animal feed, by the animal.

4. A method as claimed in claim 3, which includes 20 conducting, with aroma-conducting means, the aroma emitted by the aroma-emitting means into the vicinity of the animal feed.

5. \* A method as claimed in claim 3 or claim 4, in which the aroma is an aroma which is attractive to the animal.

6. A method as claimed in any one of the preceding claims, in which the aroma is oil-based.

5 7. A method as claimed in any one of the preceding claims, in which the animal is a domestic animal or a domesticated animal.

10 8. A method as claimed in any one of claims 1 to 6 inclusive, in which the animal is a dog and the animal feed is a dry dog food.

9. An animal feeding device which includes a body having at least one receiving formation for receiving animal feed for an animal to feed on; and locating means for locating aroma-emitting means in proximity to the receiving formation so that, in use, with animal feed in the receiving formation, an aroma emitted by the aroma-emitting means can be smelled, in the vicinity of the animal feed, by an animal.

15 10. A feeding device as claimed in claim 9, in which the aroma-emitting means is an aroma-emitting object and the locating means includes a compartment in which the object is receivable.

11. A feeding device as claimed in claim 10, in which the feeding device includes aroma-conducting means for conducting, in use, aroma emitted by the object in the compartment from the compartment into the vicinity of the animal feed.
12. A feeding device as claimed in claim 10 or claim 11, in which the body is in the form of a container which includes a container wall, the receiving formation being located on one side of the container wall and the compartment on the other side of the container wall.
13. A feeding device as claimed in claim 12, in which a part of the container wall forms a wall of the compartment, and in which the aroma-conducting means includes at least one opening or hole in said part of the container wall.
14. A feeding device as claimed in claim 13, which includes sealing means for sealing the, or each, opening, the sealing means being displaceable between a sealing position in which it seals the openings and a non-sealing, or open, position in which it is spaced from the openings.
15. A feeding device as claimed in any of claims 10 to 14 inclusive, in which the compartment includes a closeable opening for inserting the aroma-emitting object into the compartment and for removing it from the compartment.

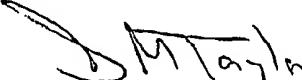
16. A method of increasing the food intake of an animal as claimed in claim 1, substantially as herein described and illustrated.

17. A method of feeding an animal as claimed in claim 3, 5 substantially as herein described and illustrated.

18. An animal feeding device as claimed in claim 9, substantially as herein described and illustrated.

19. A new method or feeding device, substantially as herein described.

DATED THIS 15th DAY OF DECEMBER 1997



ADAMS & ADAMS  
APPLICANT'S PATENT ATTORNEYS

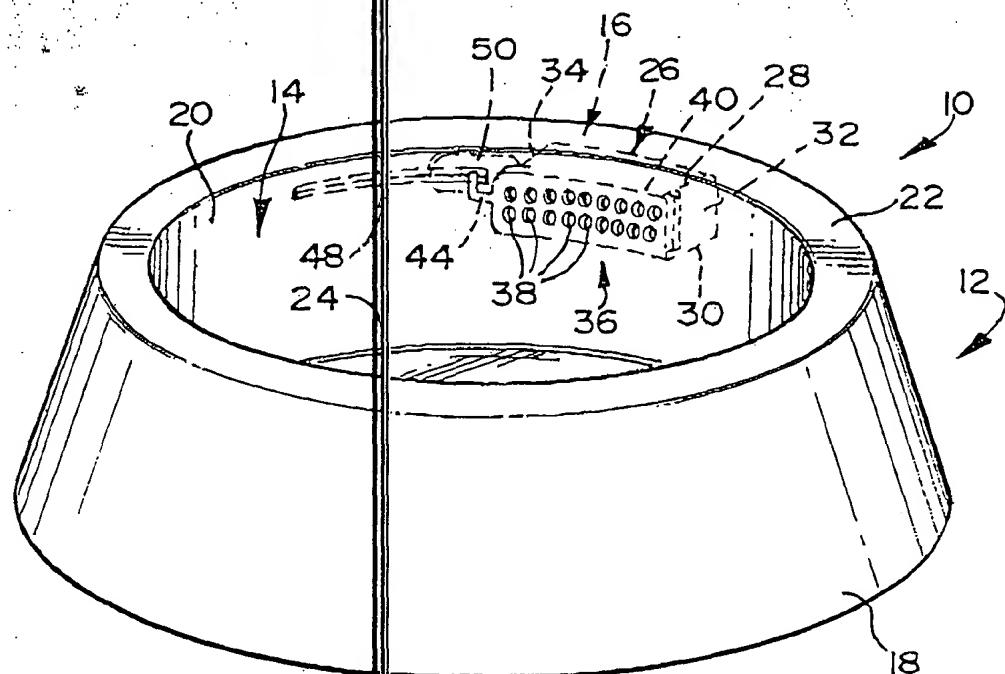


FIG 1

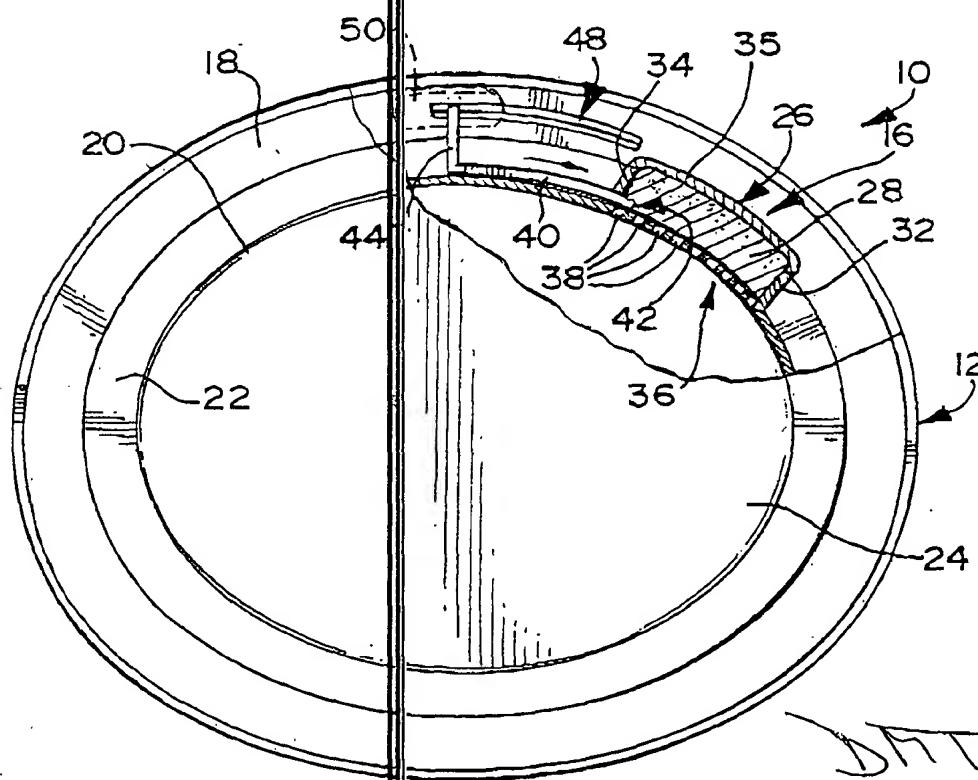


FIG 2

ADAMS & ADAMS  
APPLICANT'S PATENT ATTORNEYS

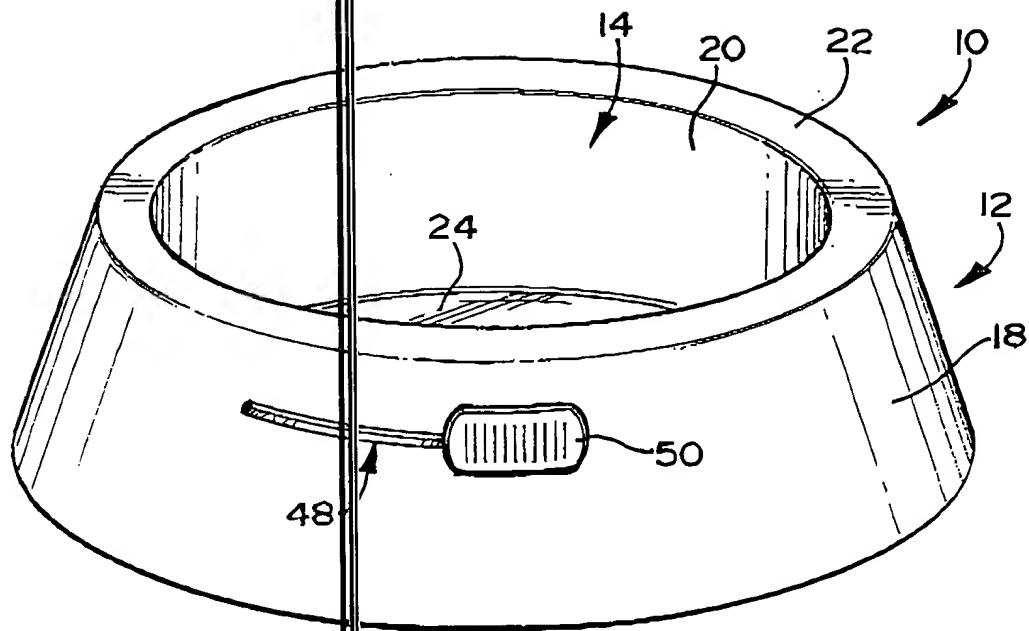


FIG 3

*[Handwritten signature]*  
ADAMS & ADAMS  
APPLICANT'S PATENT ATTORNEYS